

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. **(currently amended)** A method ~~[[for]]~~ of partitioning resource spaces and assigning physical channels and power in an OFDMA (orthogonal frequency division multiple access)-based cellular system which comprises a plurality of base stations and a plurality of cells associated with the base stations, said method comprising:

(a) partitioning a resource within ~~[[a]]~~ each slot of the cellular system into resource spaces, in common in ~~a plurality of adjacent cells~~ of the cellular system;

(b) further partitioning the partitioned resource spaces into resource sets according to respective sizes of physical channels in the adjacent cells, wherein the resource sets within one resource space of one of the adjacent cells are arranged to be collided as uniformly as possible with all the resource sets within the same resource space of another adjacent cell; and

(c) assigning the physical channels classified based on characteristics to the partitioned resource sets within the respective resource spaces.

2. **(currently amended)** A method ~~[[for]]~~ of partitioning resource spaces and assigning physical channels and power in an OFDMA (orthogonal frequency division multiple access)-based cellular system which comprises a plurality of base stations and a plurality of cells associated with the base stations, said method comprising:

(a) partitioning a resource within ~~[[a]]~~ each slot of the cellular system into resource spaces, in common in ~~a plurality of adjacent cells~~ of the cellular system;

(b) further partitioning the partitioned resource spaces into resource subspaces, in common in the adjacent cells;

(c) further partitioning the partitioned resource spaces and the partitioned resource subspaces into resource sets according to respective sizes of physical channels in the adjacent cells, wherein the resource sets within one resource space or subspace of one of the adjacent cells are arranged to be collided as uniformly as possible with all the resource sets within the same resource space or subspace of another adjacent cell; and

(d) assigning the physical channels classified based on characteristics to the partitioned resource sets within the respective resource spaces and the resource subspaces.

3. **(currently amended)** The method of claim 1, wherein the physical channels comprise one or more of ~~resource space is partitioned so that a combination of the total or part of~~ common channels, dedicated control channels, shared control channels, dedicated traffic channels, and shared traffic channels ~~[[is]]~~ and are allocated to ~~[[a]]~~ at least one of the resource spaces of each cell.

4. **(currently amended)** The method of claim 2, wherein the physical channels comprise one or more of common channels, dedicated control channels, and shared control channels; and

said (b) comprises partitioning ~~[[the]]~~ each resource space, through which the common channels, the dedicated control channels, and the shared control channels of each cell are transmitted, into the respective resource subspaces so that the channels with similar physical channel characteristics may be transmitted ~~at a subspace~~ in a single one among the subspaces.

5-6. (canceled)

7. **(currently amended)** The method of claim 1, wherein ~~[[the]]~~ subcarriers which

constitute the resource spaces are ~~[[is]]~~ configured by at least one ~~or more~~ subcarrier set which sets ~~which~~ covers at least one wide frequency band and has a predetermined spacing.

8. **(currently amended)** The method of claim ~~[[1]]~~ 2, wherein ~~[[the]]~~ subcarriers, which constitute the resource spaces and the resource subspaces are, ~~[[is]]~~ are configured by at least one ~~or more~~ subcarrier set which sets ~~which~~ covers at least one wide frequency band and has a predetermined spacing.

9. **(currently amended)** The method of claim 1, further comprising:
allocating a transmit power of the resource space to a physical channel which, ~~uses a fixed transmit power from~~ among the physical channels assigned to the resource set, uses a fixed transmit power; and

allocating a power within the maximum transmit power of the resource space to a physical channel which, ~~uses a variable transmit power from~~ among the physical channels assigned to the resource set, uses a variable transmit power.

10. **(currently amended)** The method of claim 2, further comprising:
allocating a transmit power of the resource subspace to a physical channel which, ~~uses a fixed transmit power from~~ among the physical channels assigned to the resource set, uses a fixed transmit power; and

allocating a power within the maximum transmit power of the resource subspace to a physical channel which, ~~uses a variable transmit power from~~ among the physical channels assigned to the resource set, uses a variable transmit power.

11. **(original)** The method of claim 9, wherein the transmit power is allocated by considering cell sizes, interference of adjacent cells, and a required SNR (signal to noise ratio).

12. (original) The method of claim 9, wherein the maximum transmit power is allocated by considering cell sizes, interference of adjacent cells, and a required SNR (signal to noise ratio).

13. **(currently amended)** A method of partitioning resource spaces and assigning physical channels and power in an OFDMA (orthogonal frequency division multiple access)-based cellular system which comprises a plurality of base stations and a plurality of cells associated with the base stations, said method comprising:

(a) partitioning a resource within each slot of the cellular system into resource spaces, in common in adjacent cells of the cellular system;

(b) further partitioning the partitioned resource spaces into resource subspaces, in common in the adjacent cells;

(c) further partitioning the partitioned resource spaces and the partitioned resource subspaces into resource sets according to respective sizes of physical channels in the adjacent cells; and

(d) assigning the physical channels classified based on characteristics to the partitioned resource sets within the respective resource spaces and the resource subspaces;

the method further comprising:

allocating a transmit power of the resource subspace to a physical channel which, among the physical channels assigned to the resource set, uses a fixed transmit power;

allocating a power within the maximum transmit power of the resource subspace to a physical channel which, among the physical channels assigned to the resource set, uses a variable transmit power;

~~The method of claim 10, comprising:~~ partitioning the resource space, through which [[the]] a traffic channel is transmitted, into resource subspaces by the number of adjacent cells according to a cell arrangement; and

for each cell, allocating to a resource subspace allowing a transmit power higher than that of

~~the other another~~ resource subspace, ~~wherein to a resource subspace for each cell, and~~
~~differentiating~~ the resource subspace with the ~~allowed~~ higher transmit power varies from one cell to
another cell among the ~~for each~~ adjacent cells.

14. **(currently amended)** The method of claim [[10]] 13, further comprising:
allowing wherein a user, who needs a high transmit power ~~[[for]]~~ in each cell, ~~is allowed to~~
use a traffic channel of the resource subspace with the ~~allowed~~ higher transmit power.

15. **(new)** The method of claim 10, further comprising:
partitioning the resource space, through which a traffic channel is transmitted, into resource
subspaces by the number of adjacent cells according to a cell arrangement; and
for each cell, allocating to a resource subspace a transmit power higher than that of the other
resource subspace, wherein the resource subspace with the higher transmit power varies from one
cell to another cell among the adjacent cells.

16. **(new)** The method of claim 15, further comprising:
allowing a user, who needs a high transmit power in each cell, to use a traffic channel of
the resource subspace with the higher transmit power.